

4.4 BIOLOGICAL RESOURCES

4.4.1 Setting

a. Habitats. Tuolumne County contains a wide diversity of tree (hardwood and coniferous forests, oak woodlands), shrub (chaparrals), and herbaceous (grasslands) habitat types. Thirty four habitat types are mapped using the California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) habitat classification system within Tuolumne County (CDFW, 2008) (Figure 4.4-1). A description of each of the habitats adapted from *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer, 1988) is presented below. Two of the thirty four habitat types are designated aquatic types and are discussed in Section 4.4.1.b below. The vegetation classifications from *A Manual of California Vegetation, Second Edition* (Sawyer et al., 2009) that most closely resemble those classified by the CWHR are also presented in each description. It should be noted that these habitats are generalized and that site-specific variation is likely present. Also note that the CWHR classification system maps habitats from a broad perspective and that in many areas it is expected that two or more habitats may blend with one another. Habitats which occur within populated areas can also show variation because of a greater exposure to anthropogenic influences such as the introduction of exotic plant species.

Tree-Dominated Habitats. Tuolumne County is home to a variety of hardwood, coniferous, and mixed woodlands and forests (Figure 4.4-1). These tree-dominated habitats can support diverse wildlife populations. Riparian habitats are generally the terrestrial areas adjacent to fresh water bodies forming a vegetated corridor from stream edge to floodplain edge. Riparian habitats within the county occur along the rivers, creeks, streams, and ravines in the county. Riparian areas are rich in wildlife species, providing foraging, migration, roosting, and nesting/breeding habitat. The following are those types of tree-dominated habitats that occur within Tuolumne County. Descriptions of these habitat types can be found in Appendix B.

- Aspen Forest
- Blue Oak-foothill Pine Woodland
- Blue Oak Woodland
- Closed-Cone Pine-Cypress Forest
- Douglas Fir Forest
- Eastside Pine Forest
- Jeffrey Pine Forest
- Juniper Woodland
- Lodgepole Pine Forest
- Montane Hardwood Forest
- Montane Riparian Forest
- Valley Oak Woodland
- Montane Hardwood-Coniferous Forest
- Pinyon-Juniper Woodland
- Ponderosa Pine Forest
- Red Fir Forest

- Sierran Mixed Conifer Forest
- Subalpine Conifer Forest
- White Fir Forest

Shrub Dominated Habitats. Shrub-dominated habitats, such as various chaparral communities, are comprised primarily of woody, evergreen shrubs and occur predominantly in the western portion of Tuolumne County. The following types of shrub-dominated habitats occur within Tuolumne County. Descriptions of these habitat types can be found in Appendix B

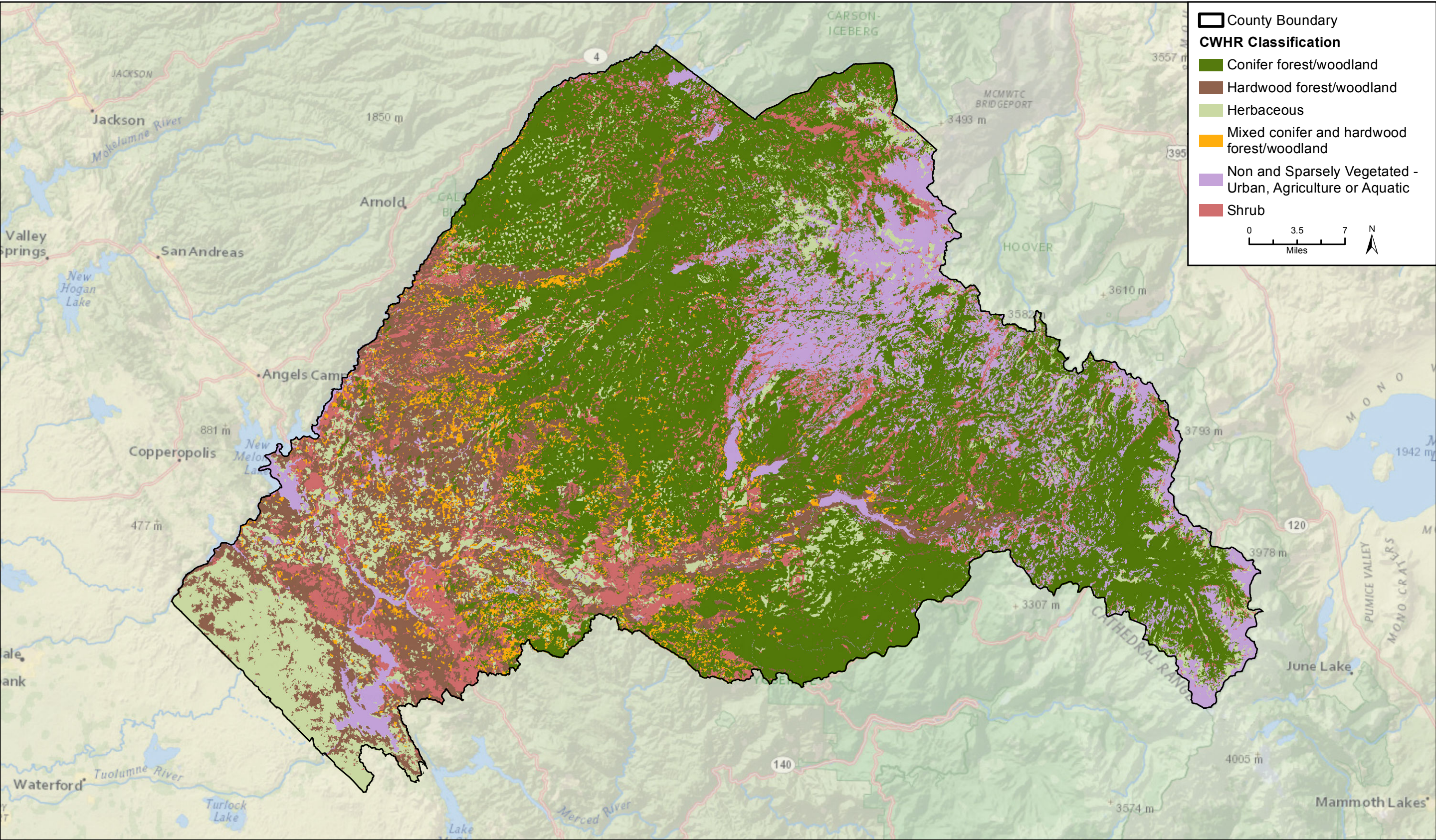
- Alpine Dwarf-Shrub.
- Chamise-Redshank Chaparral.
- Low Sage Shrubland
- Mixed Chaparral
- Montane Chaparral
- Sagebrush Shrubland

Herbaceous Dominated Habitats. These habitats are generally comprised of areas dominated by grasses and other non-woody species. The majority of this habitat in Tuolumne County is comprised of non-native grasslands located in the lowlands of the western portion of the county. The following types of herbaceous-dominated habitats occur within Tuolumne County. Descriptions of these habitat types can be found in Appendix B.

- Annual Grasslands
- Perennial Grassland
- Wet Meadow

Developed and Sparsely/Non-Vegetated Habitats. Developed habitats are usually sparsely or non-vegetated and are associated with urban and agricultural areas and are highly disturbed. Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental species. Sparsely vegetated habitats also tend to be associated with rock outcrops and cliffs. The following are types of developed and sparsely/non-vegetated that occur within Tuolumne County. Descriptions of these habitat types can be found in Appendix B.

- Cropland
- Deciduous Orchard
- Urban
- Barren



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California Wildlife Habitat Relationship
Classifications within Tuolumne County

Figure 4.4-1
Tuolumne County

b. Drainages and Wetlands.

Drainages. The County contains two principal rivers and their watersheds: Stanislaus River and Tuolumne River. Several creeks and tributaries are associated with each one of these watersheds (Figures 4.4-2a, 4.4-2b and 4.4-2c). The drainages within these watersheds are of biological importance as they provide valuable foraging habitat, breeding habitat, and movement habitat for a wide variety of animal species, including sensitive species such as Paiute cutthroat trout (*Oncorhynchus clarkii seleniris*) and California red-legged frog (*Rana draytonii*). Information regarding each watershed is provided below.

- Stanislaus River: This river is an approximately 65-mile long waterway that flows from the Sierra Nevada to the San Joaquin River in the eastern part of the Central Valley and is one of the largest tributaries of the San Joaquin River. The Stanislaus River Watershed covers an area of approximately 904 square miles. The river originates as North, Middle, and South Forks in the Stanislaus National Forest in the Sierra Nevada Mountains. The confluence of these forks northeast of New Melones Lake forms the Stanislaus River. The North Fork forms the northwestern boundary of the County.
- Tuolumne River: The headwaters of this river originate in the High Sierra at the eastern edge of Tuolumne Meadows in Yosemite National Park. The watershed area covers approximately 1,533 square miles. The Tuolumne River flows through Yosemite National Park and into Hetch Hetchy Valley, which was flooded behind the O'Shaughnessy Dam in 1923, and then into the Stanislaus National Forest. At the O'Shaughnessy Dam, approximately 33% of the river's flow is diverted to the San Francisco Bay Area, where it provides drinking water for nearly 2.5 million people.

Wetlands. Wetlands are regarded as important biological resources both because of their rarity and because they serve a variety of functional values. Several types of wetlands exist in the County, including freshwater marshes, vernal pools, and riparian habitats.

Vernal Pools. These seasonal wetlands are small depressions that fill with water during the winter, gradually drying during the spring and becoming completely dry in the summer. These pools are found in only a few places in the world outside of California. Vernal pool vegetation is characterized by herbaceous plants that begin their growth as aquatic or semi-aquatic plants and transition to a dry land environment as the pool dries. Most vernal pool plants are annual herbs.

In addition to vernal pools, several areas within the county are mapped by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS, 2015c). A general description of each of the classifications is provided below. Of those wetland types mapped by the NWI, freshwater emergent wetland, riverine and lacustrine habitats are also mapped by the CWHR.

Freshwater Emergent Wetlands. Freshwater emergent wetlands include all non-tidal waters dominated by emergent herbaceous plant species, mosses, and/or lichens. Wetlands of this type are also low in salinity. Wetlands which lack vegetation can be included in this class if they are less than 20 acres, do not have an active wave-formed or bedrock shoreline feature, and

have a low water depth less than 6.6 feet. This wetland type is also mapped by the CWHR. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots. All emergent wetlands are flooded frequently, enough so that the roots of the vegetation prosper in an anaerobic environment. The vegetation may vary in size from small clumps to vast areas covering several kilometers. The acreage of Fresh Emergent Wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

Freshwater Forested/Shrub Wetlands. These wetlands include non-tidal waters which are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. Wetlands which lack vegetation can be included in this class if they also exhibit the same criteria as described for freshwater emergent wetlands. The vegetation found in freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees.

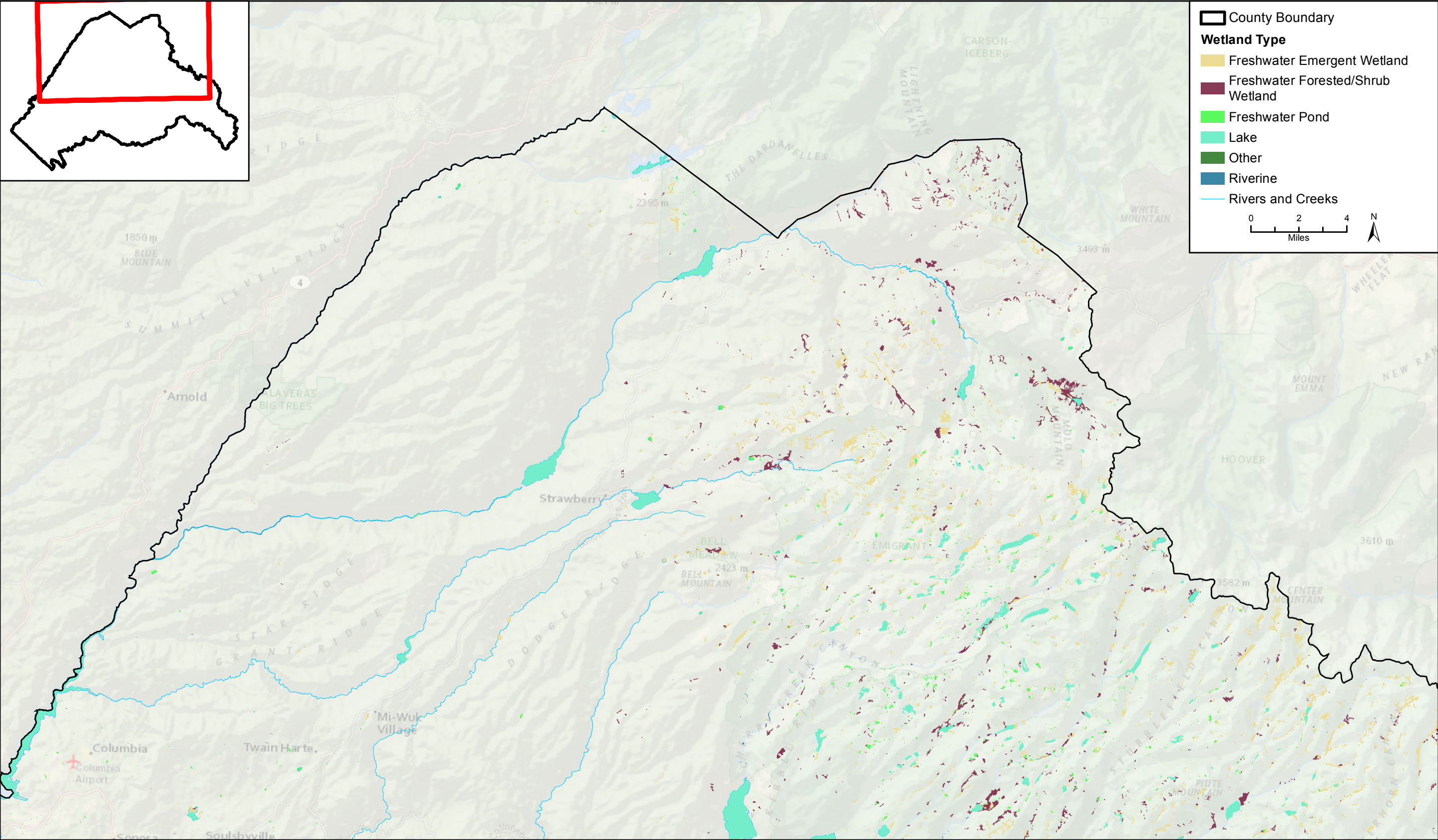
Freshwater Ponds. Freshwater ponds include non-tidal waters with vegetative cover along its edges such as trees, shrubs, emergent herbaceous plants, mosses, and/or lichens. Freshwater ponds can be man-made or natural and typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deep water habitats are dominated by plants that grow on or below the surface of the water. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat which includes vernal pools.

Lakes. Lakes are a lacustrine system which includes wetlands and deep water habitats that are located in a topographic depression or dammed river channel. These areas tend to be greater than 20 acres. Vegetation cover within this habitat is generally less than 30 percent and often occurs in the form of emergent or surface vegetation. Substrates are composed of at least 25 percent cover of particles smaller than stones. This wetland type is also mapped by the CWHR and categorized as lacustrine habitat which also includes vernal pools.

Riverine. Riverine habitats are a riverine system which includes all wetlands and deep water habitats contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel or sand.

c. Special Status Species and Sensitive Communities. For the purpose of this EIR, special status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act; those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as “Species of Special Concern,” “Fully Protected,” or “Watch List” by the CDFW; and plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, which are defined as:

- *List 1A = Plants presumed extinct in California;*
- *List 1B.1 = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);*
- *List 1B.2 = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened);*

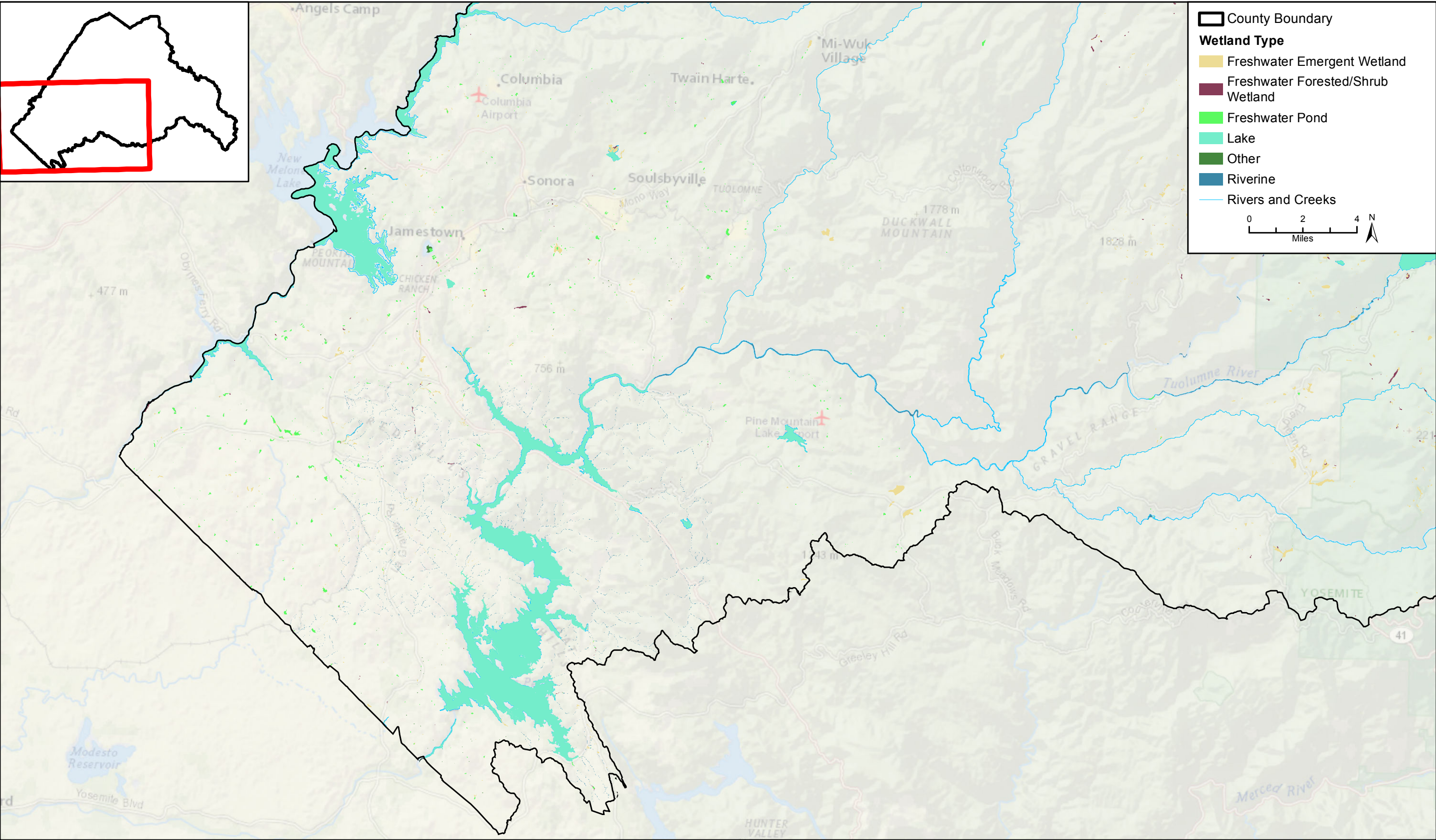


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CALVEG, 2012.

National Wetlands Inventory Categories
and Drainages within Tuolumne County

Figure 4.4-2a

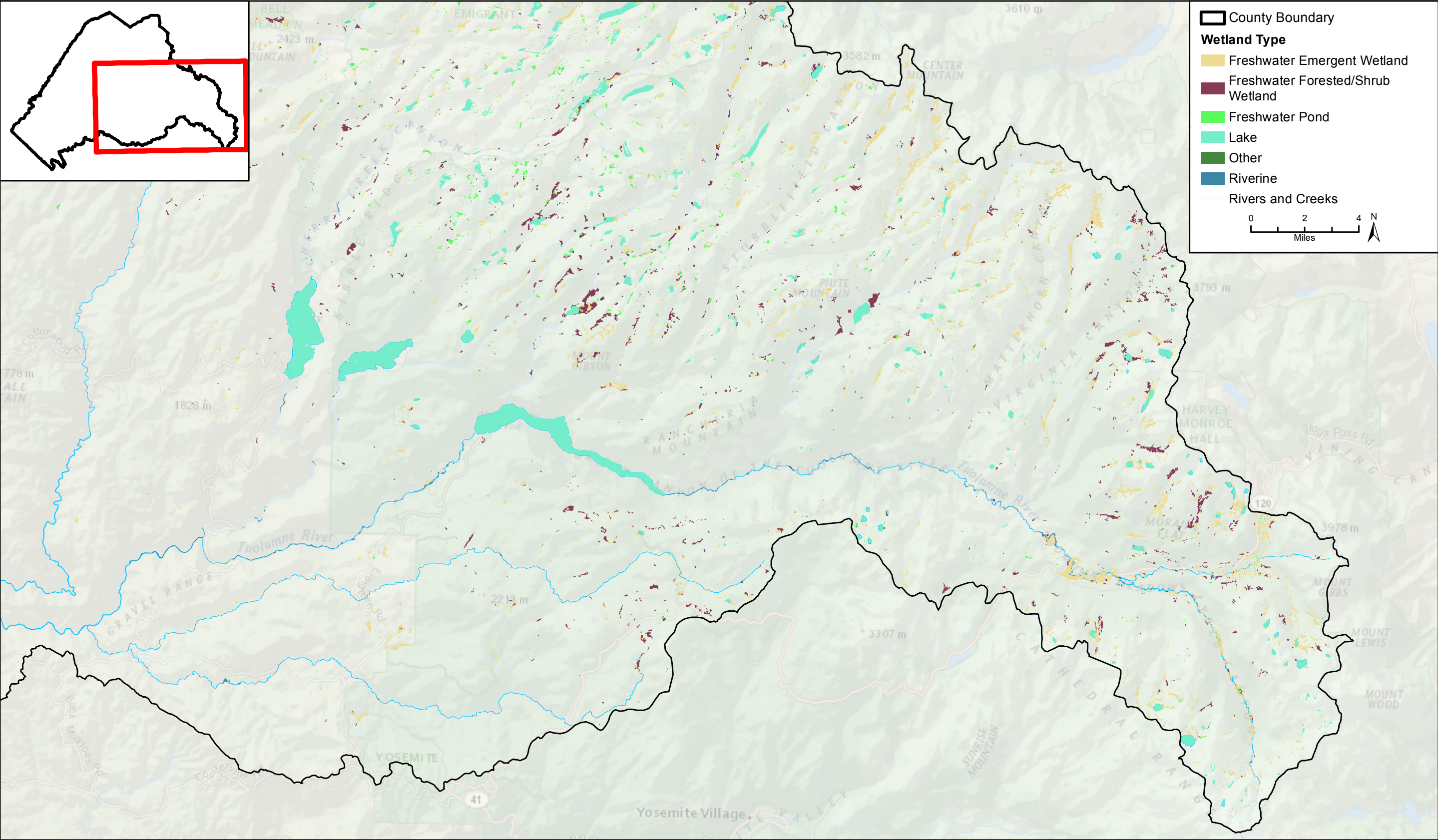
Tuolumne County



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CALVEG, 2012.

National Wetlands Inventory Categories
and Drainages within Tuolumne County

Figure 4.4-2V



National Wetlands Inventory Categories
and Drainages within Tuolumne County

Figure 4.4-2c

Tuolumne County

- List 1B.3 = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known);
- List 2 = Rare, threatened or endangered in California, but more common elsewhere;
- List 3 = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- List 4.1 = Plants of limited distribution (watch list), seriously endangered in California;
- List 4.2 = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and
- List 4.3 = Plants of limited distribution (watch list), not very endangered in California.

CRPR List 3 and List 4 plant species are typically not considered for analysis under CEQA except where they are designated as rare or otherwise protected by local government. Therefore these plant species are not included in subsequent impact analysis. CRPR List 1B and 2 species are typically regarded as rare, threatened, or endangered under CEQA by lead agencies and were considered in impact analysis.

Queries of the USFWS Environmental Conservation Online System (ECOS) (USFWS, 2015b), USFWS Critical Habitat Portal (USFWS, 2015a), California Natural Diversity Database (CNDDB) (CDFW, 2015), and California Native Plant Society (CNPS) *Online Inventory of Rare, Threatened and Endangered Plants of California* (CNPS, 2015) were conducted. The queries were conducted to obtain comprehensive information regarding state and federally listed species, sensitive communities and federally designated Critical Habitat known to or considered to have potential to occur within Tuolumne County.

Sensitive Communities and Critical Habitat. Several natural communities considered sensitive by the CDFW occur within Tuolumne County. The CNDDB lists one natural community that occurs within Tuolumne County. Federally designated critical habitat for eight species also occurs in Tuolumne County (Figure 4.4-3). These sensitive communities and critical habitats are listed in Table 4.4-1.

Table 4.4-1
Sensitive Communities and Critical Habitats
Documented within Tuolumne County

Communities Considered Sensitive by the CDFW (CNDDB)
Big Tree Forest
Critical Habitat
Sierra Nevada yellow-legged frog (<i>Rana sierrae</i>)
Colusa grass (<i>Neostapfia colusana</i>)
Fleshy owl's-clover (<i>Castilleja campestris</i> ssp. <i>succulenta</i>)
Sierra Nevada bighorn sheep (<i>Ovis canadensis sierrae</i>)
Hoover's spurge (<i>Chamaesyce hooveri</i>)
Greene's Tuctoria (<i>Tuctoria greenei</i>)
Yosemite toad (<i>Anaxyrus canorus</i>)
Steelhead – Central Valley Distinct Population segment (DPS) (<i>Oncorhynchus mykiss irideus</i>)

Sources: CNDDB (CDFW, 2015); USFWS, Critical Habitat Portal (2015a)

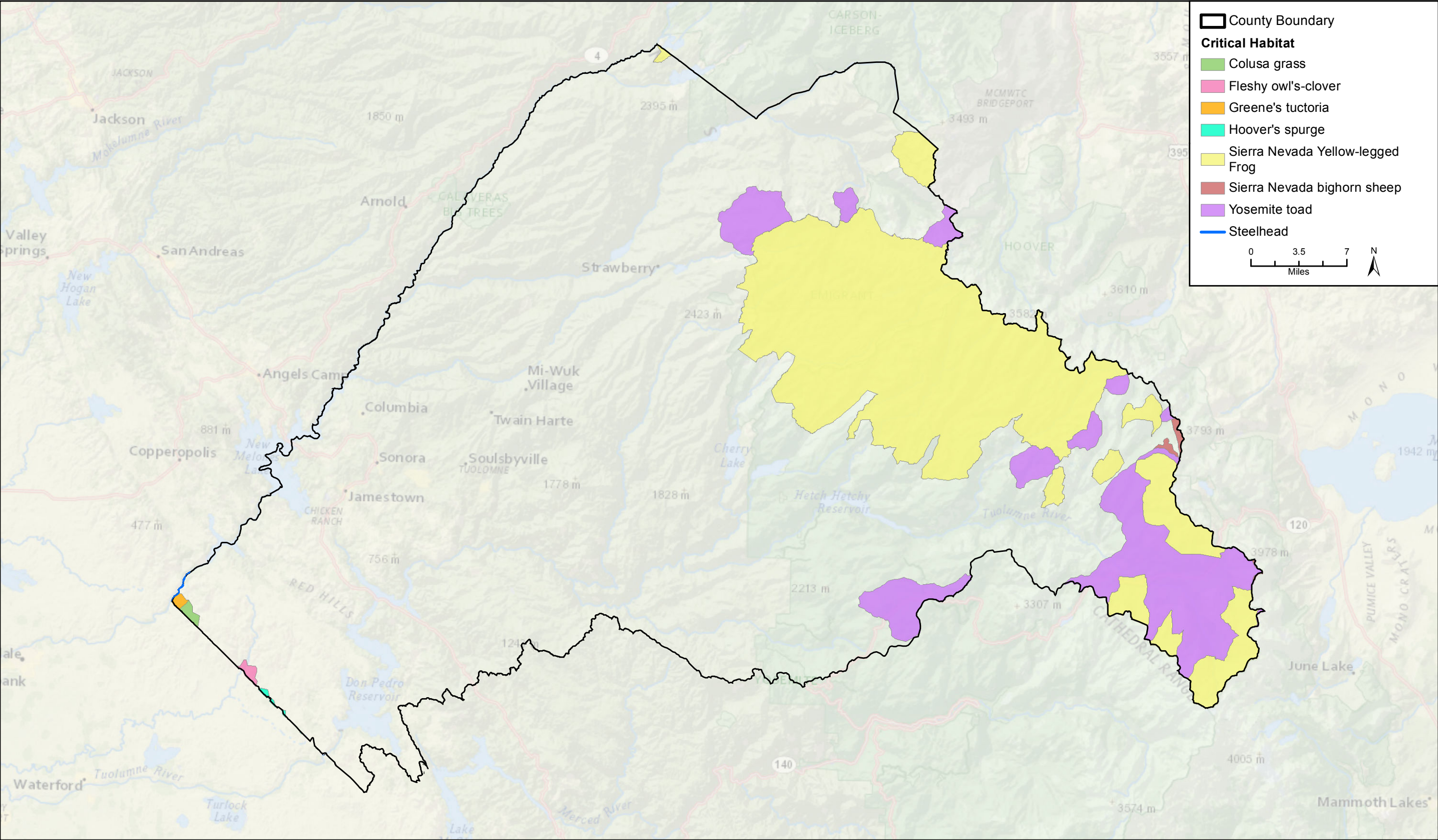
The Sensitive Natural Communities List in the CNDDDB is not currently maintained and no new information has been added. As such, the CDFW maintains a List of Vegetation Alliances and Associations (California Department of Fish and Wildlife, 2010). According to the California Department of Fish and Wildlife's Vegetation Program, Alliances with State ranks of S1-S3 are considered to be imperiled, and thus, potentially of special concern. Because this analysis is at the county level, vegetation mapping and analysis at the alliance and association level is not available at this time and would need to be conducted at the project level. That said, some sensitive vegetation alliances and associations do occur within Tuolumne County as a subset of the habitats described in Section 4.4.1.a. For instance, some oak woodland alliances within the county, such as *Quercus lobata* Woodland Alliance, are considered sensitive.

Special Status Plants and Animals. Tuolumne County is home to several species protected by federal and state agencies. Important animal species can be found in a variety of habitats the County of Tuolumne hosts. The CNDDDB (CDFW, 2015), CNPS (2015), and USFWS ECOS (2015b) together list 177 special status animal (42 species) species and plant (135 species) that are known to or with potential to occur within Tuolumne County. The status and habitat requirements for each of these species are presented in Tables 1 and 2 respectively in Appendix B.

d. Wildlife Movement Corridors. Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time.

Corridors usually connect one large habitat area with another, and while there is no pre-defined size limit for such areas, they most often are on the scale of mountain ranges, valleys, rivers and creeks, or clearly delimited ecological situations (e.g., vernal pools). The *Missing Linkages: Restoring Connectivity to California Landscape* (Penrod et al., 2001) conference refers to such corridors as "landscape linkages." These are specifically defined in that report as:



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U.S. Fish and Wildlife Service, July, 2015.

Federally Designated Critical Habitat
within Tuolumne County

Figure 4.4-3

“large, regional connections between habitat blocks (“core areas”) meant to facilitate animal movement and other essential flows between different sections of a landscape (taken from Soulé and Terborgh 1999). These linkages are not necessarily constricted, but are essential to maintain connectivity function in the ecoregion.”

Wildlife movement corridors can be both large and small scale. Tuolumne County contains one landscape linkage identified by the above reference. Regionally, Tuolumne County is located within two Essential Connectivity Areas (ECAs) as mapped in the report, California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California (2010) (Appendix B). One located in the northern portion of the county and the other in the lower elevation portion of the western county. ECAs represent principle connections between Natural Landscape Blocks. ECAs are regions in which land conservation and management actions should be prioritized to maintain and enhance ecological connectivity. ECAs are mapped based on coarse ecological condition indicators, rather than the needs of particular species and thus serve the majority of species in each region. Small scale habitat corridors, though, can also be present on sites and include drainages and other topographic features that facilitate movement such as those in the mountainous regions of the county. The drainages found within the range as mapped in Figure 4.4-2a and Figure 4.4-2b, may provide opportunities for small scale regional connections for a number of wildlife species.

e. Regulatory Setting. Federal, state, and local authorities under a variety of statutes and guidelines share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance is the County of Tuolumne. The CDFW is a trustee agency for biological resources throughout the State under the California Environmental Quality Act (CEQA) and also has direct jurisdiction under the California Fish and Game Code (CFGC), which includes, but is not limited to, resources protected by the State of California under the California Endangered Species Act (CESA).

Federal and State Jurisdictions.

United States Fish and Wildlife Service. The USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). The USFWS and National Marine Fisheries Service (NMFS) share responsibility for implementing the Federal Endangered Species Act (FESA) (16 USC § 153 *et seq.*). The USFWS generally implements the FESA for terrestrial and freshwater species, while the NMFS implements the FESA for marine and anadromous species. Projects that would result in “take” of any federally listed threatened or endangered species are required to obtain permits from the USFWS and/or NMFS through either Section 7 (interagency consultation with a federal nexus) or Section 10 (Habitat Conservation Plan) of FESA, depending on the involvement by the federal government in permitting and/or funding of the project. The permitting process is used to determine if a project would jeopardize the continued existence of a listed species and what measures would be required to avoid jeopardizing the species. “Take” under federal definition means to harass, harm (which includes habitat modification), pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Proposed or candidate species do not have the full protection of FESA; however, the USFWS and NMFS advise project applicants that they could be elevated to listed status at any time.

United States Army Corps of Engineers. Under Section 404 of the Clean Water Act, the U.S. Army Corps of Engineers (USACE) has authority to regulate activities that result in discharge of dredged or fill material into wetlands or other “waters of the United States.” Perennial and intermittent creeks are considered waters of the United States if they are hydrologically connected to other jurisdictional waters. The USACE also implements the federal policy embodied in Executive Order 11990, which is intended to result in no net loss of wetlands. In achieving the goals of the Clean Water Act, the USACE seeks to avoid adverse impacts and offset unavoidable adverse impacts on existing aquatic resources. Any discharge into wetlands or other “waters of the United States” that are hydrologically connected and/or demonstrate a significant nexus to jurisdictional waters would require a permit from the USACE prior to the start of work. Typically, when a project involves impacts to waters of the United States, the goal of no net loss of wetlands is met through compensatory mitigation involving creation or enhancement of similar habitats.

California Department of Fish and Wildlife (formerly the California Department of Fish and Game). The CDFW derives its authority from the Fish and Game Code of California. The California Endangered Species Act (CESA) (Fish and Game Code Section 2050 *et. seq.*) prohibits take of State-listed threatened and endangered species. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification. The CDFW additionally prohibits take for species designated as Fully Protected under the CFGC under various sections.

California Fish and Game Code sections 3503, 3503.5, and 3511 describe unlawful take, possession, or destruction of birds, nests, and eggs. Fully protected birds (CFGF Section 3511) may not be taken or possessed except under specific permit. Section 3503.5 of the Code protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs. Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered to be indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code as noted above. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are consider sensitive as described under the CEQA Appendix G questions. The CDFW also has authority to administer the Native Plant Protection Act (NPPA) (CFGF Section 1900 *et seq.*). The NPPA requires the CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the NPPA, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Perennial and intermittent streams and associated riparian vegetation, when present, also fall under the jurisdiction of the CDFW. Section 1600 *et seq.* of the Fish and Game Code (Lake and Streambed Alteration Agreements) gives the CDFW regulatory authority over work within the stream zone (which could extend to the 100-year flood plain) consisting of, but not limited to, the diversion or obstruction of the natural flow or changes in the channel, bed, or bank of any river, stream or lake.

Regional Water Quality Control Board. The State Water Resources Control Board (SWRCB) and each of nine local Regional Water Quality Control Boards (RWQCB) has jurisdiction over “waters of the State” pursuant to the Porter-Cologne Water Quality Control Act which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. The SWRCB has issued general Waste Discharge Requirements (WDRs) regarding discharges to “isolated” waters of the State (Water Quality Order No. 2004-0004-DWQ, *Statewide General Waste Discharge Requirements for Dredged or Fill Discharges to Waters Deemed by the U.S. Army Corps of Engineers to be Outside of Federal Jurisdiction*). The local RWQCB enforces actions under this general order for isolated waters not subject to federal jurisdiction, and is also responsible for the issuance of water quality certifications pursuant to Section 401 of the CWA for waters subject to federal jurisdiction.

California Department of Transportation - California Streets and Highways Code Section 156.3. Assessments and remediation of potential barriers to fish passage for transportation projects using State or federal transportation funds are required. Such assessments must be conducted for any projects that involve stream crossings or other alterations and must be submitted to the CDFW.

Public Resources Code 21083.4 / Senate Bill 1334 (Kuehl). Through the passage of SB 1334, which enacted Public Resources Code (PRC) 21083.4, the potential conversion of oak woodland is subject to CEQA and is to be mitigated. All 58 counties in California are required to adopt oak woodlands management plans and ordinances that require a discretionary permit for oak woodland conversions and set a minimum mitigation standard. PRC 21083.4 offers a “menu” of mitigation options. Mitigation options double the acreage of the land converted and provide for equivalent biological value. The planting option requires replacement trees at a five to one ratio. For projects located within an existing urbanized area, Urban Reserve Line, Urban Services Line, or within a city’s sphere of influence as approved by LAFCO, mitigation could be reduced to one to one. Mitigation options in PRC 21083.4 options include:

- A monetary contribution to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements.
- Onsite mitigation which requires the dedication in perpetuity of a conservation easement on mitigation lands that are contiguous to the project and that will provide for a biologically functional
- Offsite mitigation which requires the procurement of oak woodland habitat of equivalent biological value. Those mitigation lands shall be purchased in fee or by a conservation easement and conserved in perpetuity.
- Monitoring and replacement of dead and diseased trees would be required. The planting mitigation alternative may be used in conjunction with the other mitigation alternatives.
- If the Department of Fish and Game establishes a mitigation bank, the mitigation bank could be used to fulfill the offsite mitigation requirements of an oak woodlands conversion project, but no landowner may be compelled to use the mitigation bank.

The oak woodlands management plan or county ordinance may exempt the following activities:



- Affordable housing projects for low and very low income (as defined HCD) located within an existing urbanized area, Urban Reserve Line, Urban Services Line, or within a city's sphere of influence as approved by LAFCO.
- The conversion of three acres or less of oak woodlands. A person or other legal entity may not use this exemption more than once in a five-year period.
- The harvesting of fuelwood for (non-commercial) use on the parcel from which it is harvested.
- An approved Natural Community Conservation Plan or approved subarea plan within an approved Natural Community Conservation Plan that includes oaks as a covered species.
- The removal of dead and diseased trees that pose significant risks to life, property, or to healthy trees.
- Projects within oak woodlands in which no oak trees greater than five inches in diameter at breast height are to be removed or projects that do not encroach upon the dripline of oak trees greater than five inches at breast height.

Currently, Tuolumne County allows for the conversion of an area of oak woodland if an area of equivalent habitat value is provided and designated through O (Open Space) or O-1 (Open Space - 1) zoning or through a contribution to the Tuolumne County Oak Woodland Mitigation Fund.

Tuolumne County Ordinance Code. Chapter 9.24 of the County's Ordinance Code (Ordinance 2903)- Premature Removal Of Native Oak Trees, provides requirements intended to discourage the premature removal of oak trees. Chapter 9.24 stipulates that the removal of native oak trees from a project site within the five (5) years preceding the submittal of an application for a discretionary entitlement from the County of Tuolumne for a land development project on that site is deemed premature removal and sets forth penalties and requirements for mitigation. The ordinance specifies that removals that qualify include:

- a. Removal of native oak trees resulting in a 10% or more (>10%) average decrease in native oak canopy cover within an oak woodland;
- b. Removal of any old growth oak trees;
- c. Removal of any Valley Oak measuring 5" or greater in diameter at breast height (dbh).

The premature removal of native oak trees is subject to penalties, including withholding approval of an application for a discretionary entitlement on the site for a period of up to five years, and monetary penalties as high as three times the in-lieu fee established by the Board of Supervisors.

Tuolumne County Oak Woodland Conservation Fund. In 2008, the Tuolumne County Board of Supervisors adopted resolution 14-08, establishing the Tuolumne County Oak Woodland Conservation Fund for the collection of fees to mitigate impacts to oak woodlands and net loss of old growth oaks. The money collected in the fund may only be allocated by the Board of Supervisors. The fund may be used to purchase land in fee or conservation easements for the protection of native oak woodlands or for other measures that will restore or enhance native

oak woodlands, or otherwise mitigate the impacts associated with the conversion of oak woodlands or impacts to old growth oaks (Tuolumne County Homepage, Oak Preservation, Accessed November 2015).

Local Jurisdictions General Plans. The existing Tuolumne County General Plan was adopted on December 26, 1996. It has a planning horizon of 25 years. The Conservation and Open Space element contains goals and policies related to the protection of biological resources.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. It should be noted that the following analysis is programmatic and is not developed for specific projects. Thus, specific impacts to biological resources are unknown and a qualitative analysis is presented herein. Data used for this analysis include aerial photographs, topographic maps, the CNDDDB, the CNPS online inventory of rare and endangered plants, and accepted scientific texts to identify species. Federal special status species inventories maintained by the USFWS were reviewed in conjunction with the CNDDDB and CNPS online inventory. Other data on biological resources were collected from numerous sources, including relevant literature, maps of natural resources, and data on special status species and sensitive habitat information obtained from the California Department of Fish and Wildlife (CDFW) (formerly referred to as the California Department of Fish and Game) California Natural Diversity Data Base (CNDDDB) (2015), the California Wildlife Habitat Relationships (CWHR) (CDFW, 2008), the California Native Plant Society (CNPS) online *Inventory of Rare, Threatened, and Endangered Plants of California* (2015), and the U.S. Fish and Wildlife Service (USFWS) ECOS (2015b). The USFWS Critical Habitat Mapper (2015a) and National Wetlands Inventory (NWI; 2015c) were also queried.

Evaluation Criteria. The following thresholds are based on Appendix G of the *State CEQA Guidelines*. Impacts would be significant if the General Plan Update would result in any of the following:

1. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
2. *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
3. *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
4. *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*

5. *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or*
6. *Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.*

b. Project Impacts. The following section presents a programmatic-level discussion of the potential for impacts to sensitive biological resources from development facilitated by implementation of the Tuolumne County General Plan Update.

Impact BIO-1 **Development facilitated by the General Plan Update may result in impacts to special status plant and animal species. However, the proposed General Plan Update’s policies and implementation programs would reduce potential impacts of General Plan buildout. This impact would be *Class III, less than significant*.**

For the purposes of this analysis, special status plant and animal species include those designations described under 4.4.1.c above. Under the proposed General Plan Update, the majority of new development is expected to occur in urbanized areas, primarily within the urban development boundaries for each of the five Community Plans areas (Jamestown, Columbia, East Sonora, Tuolumne, and Mountain Springs). However, the existing urban development boundaries may be expanded to allow dense growth to occur near existing community nodes. Development that would occur outside of existing urban development boundaries would mostly occur adjacent to the urban boundaries of the plan areas, known as the urban fringe. As mentioned above and presented in Tables 1 and 2 (Appendix B), there are 177 special status species known to occur or with potential to occur within Tuolumne County, the majority of which are plant species. Thirty one of these species (21 animal species and 10 plant species) are given high levels of protection by the federal government through listing under FESA and/or by the State government through listing under CESA or Fully Protected. The remaining species shown in Tables 1 and 2 (Appendix B) are protected through CEQA. Most special-status species have very limited ranges within Tuolumne County and have specific habitat requirements, such as specific soil requirements. Special status species may also tend to be associated with sensitive habitats, such as riparian habitats, oak woodlands, and drainages.

Because of the programmatic nature of the General Plan Update, a precise, project-level analysis of the specific impacts of individual projects on special-status species is not possible at this time and the level of analysis is maintained at the County level. Build-out under the General Plan Update is focused to the urban development boundaries and infill located within existing communities which would minimize or avoid the impact to special status species. However, some special-status species are expected to be encountered within Tuolumne County most likely where build-out is expected to occur within or adjacent to natural habitats such as at urban fringe areas.

Development and transportation infrastructure projects that occur in the vicinity of rivers and creeks may be within suitable habitat for species such as California red-legged frog (*Rana draytonii*) (Federally Threatened and State Species of Special Concern) and Paiute cutthroat trout

(*Oncorhynchus clarkii seleniris*) (Federally Threatened). In addition to the rivers and creeks that may be impacted, future development and transportation projects under the proposed General Plan Update could impact upland habitats and the sensitive plant and animal species that may occupy them. Furthermore, the wide variety of habitats within Tuolumne County, including those already largely developed, can support many species of nesting birds, including sensitive species such as the State Species of Special Concern burrowing owl (*Athene cunicularia*) as well as many common bird species that are protected by the MBTA and CFGC. Disturbance of special-status plants such as the federal Threatened and state Endangered Chinese camp brodiaea (*Brodiaea pallida*) could result in reductions in local population size, habitat fragmentation, or lower reproductive success.

Direct impacts to special status species include injury or mortality that may occur during future development and transportation improvements that may occur under the General Plan Update. Direct impacts also include habitat modification and loss such that it results in the mortality or otherwise alters the foraging and breeding behavior substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats, potentially eliminating special status plant species and reducing the availability of suitable forage and breeding sites for special status animal species. Indirect impacts could also result from increased access by humans and domestic animals, particularly in areas where trails, bike paths and other transportation infrastructure would be located.

Although development under the General Plan Update may impact special status plant and animal species, the General Plan Update includes the following policies and implementation programs, the implementation of which would reduce impacts to special status species.

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|---------------------|--|
| <i>Policy 4.J.3</i> | <i>Provide local information to assist in the evaluation of biological resources.</i> |
| <i>Policy 4.J.4</i> | <i>Evaluate impacts to biological resources in accordance with, but not exceeding, the requirements of State and Federal law.</i> |
| <i>Policy 4.J.6</i> | <i>Recognize the problems associated with invasive plant species.</i> |
| <i>Policy 4.J.7</i> | <i>Encourage planting of native species or other drought tolerant species in landscaping, revegetation and reclamation.</i> |
| <i>Policy 4.J.8</i> | <i>Encourage development in urban areas and infill projects to minimize impacts to biological resources.</i> |
| <i>Policy 4.K.1</i> | <i>Develop, promote, identify and assist in the implementation of voluntary incentive programs to encourage private property owners to conserve areas that support high value biological resources, such as habitat for rare, threatened and endangered species; habitats that are particularly valuable to wildlife and/or rare in the County; and undisturbed oak woodlands.</i> |

Policy 4.K.2

Support efforts to identify and acquire high value biological resource areas on private lands from willing sellers, especially those areas that provide additional public benefits including educational, recreational and scenic opportunities, protect and encourage productive use of valuable agricultural lands and areas which provide buffers between defined communities.

*Implementation
Program 4.J.g*

Mitigate Impacts Consistent with State and Federal Law. Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- Threatened and Endangered plant and animal species listed by the Federal Endangered Species Act.*
- Rare, Threatened and Endangered plant and animal species listed by the California Endangered Species Act.*
- Other special status species including, but not limited to, Federal candidate species for listing, State candidate species for listing, California Fully Protected Species, California Species of Special Concern, State designated Birds of Prey (subject to Section 3503.5 of the Fish and Game Code), birds subject to the Migratory Bird Treaty Act, plant species listed by the California Native Plant Society as Rank 1 or 2, bald eagles and golden eagles.*
- Wetlands under either Federal or State jurisdiction.*
- Oak woodlands, except as provided in Implementation Program 4.J.h.*

*Implementation
Program 4.J.k*

Eradicate Invasive Plant Species. Support the efforts of the Agricultural Commissioner to eradicate invasive plant species from the County. Refer applications for discretionary land development entitlements to the Agricultural Commissioner to identify potential impacts from invasive plant species and recommend appropriate mitigation measures. Encourage eradication of invasive plant species in biological resource conservation areas provided such eradication is addressed in a management plan prepared by a biologist on the County's list of approved environmental consultants and approved by the County following review under the California Environmental Quality Act.

*Implementation
Program 4.J.l*

Seek Funding for Eradication of Invasive Plant Species. Support the efforts of the Agricultural Commissioner to seek grant and other funding sources for programs to eradicate invasive plant species from the County.

Implementation



Program 4.J.o Utilize Native Species and Other Drought Tolerant Species. Encourage the use of native species and other drought tolerant species listed on the Tuolumne County Landscape Guidelines for landscaping, revegetation and reclamation to promote water efficiency and reduce impacts associated with exotic species.

*Implementation
Program 4.J.p Encourage Development in Urban and Infill Areas. Provide incentives to encourage development in urban and infill areas to minimize impacts to biological resources.*

*Implementation
Program 4.J.q Reduced Impacts from Urban and Infill Development. When evaluating land development projects proposed in urban and infill areas, recognize that there may be reduced impacts to biological resources from concentrating new development adjacent to existing developed areas rather than disturbing remote areas that are free from the effects of development.*

The Jamestown Community Plan includes the following policy, the implementation of which reduces potential impacts to special status species within the Jamestown plan area.

Policy 14.F.6 Minimize the inherent conflict between development and wildlife habitat by encouraging future development to locate in the less sensitive, or less important habitat areas or on sites adjacent to previously developed and disturbed areas.

The Columbia Community Plan includes the following policy, the implementation of which reduces potential impacts to special status species within the Columbia plan area.

Policy 15.E.3 Minimize conflicts between development and wildlife habitat by encouraging future development to locate in less sensitive, or lower priority habitat areas or on sites adjacent to previously developed and disturbed areas.

The East Sonora Community Plan includes the following policies, the implementation of which reduce potential impacts to special status species within the East Sonora plan area.

Policy 16.C.1 Minimize the existing conflict between development and wildlife habitat within East Sonora.

Policy 16.C.3 Encourage new development to capitalize on the use of native vegetation for aesthetic and functional purposes.

The Tuolumne Community Plan includes the following implementation program, the implementation of which reduces potential impacts to special status species within the Tuolumne plan area.

*Implementation
Program 17.F.d*

Revegetation. For revegetation efforts, promote the application of native seed mixes for consistency with the naturally occurring vegetation and emphasizing the use of native grasses. Promote the use of native plants from locally grown stock (e.g., the Tuolumne Band of Me-Wuk Native Plant Nursery) for revegetation efforts requiring trees, shrubs and other perennials.

Implementation of implementation program 4.J.g would require development that is subject to a discretionary entitlement from the County and to environmental review under CEQA to determine and mitigate for impacts to special status species. Additional policies and implementation programs are aimed to reduce the prevalence of non-native species and encourage avoidance of high quality habitat areas. Implementation of the above policies and implementation programs to protect special status species, would reduce impacts to special status species to a less than significant level.

Mitigation Measures. Additional mitigation beyond adherence to applicable proposed General Plan policies and implementation programs is not required as impacts would be less than significant.

Significance after Mitigation. The proposed General Plan Update policies and implementation programs, would reduce potential impacts of General Plan buildout to special status species as discussed above. Therefore, impacts to special status species would remain less than significant.

Impact BIO-2

Development facilitated by the General Plan Update may result in impacts to riparian habitat or other sensitive natural communities identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. This impact would be Class II, significant but mitigable.

Under the proposed General Plan Update, the majority of new development is expected to occur in urbanized areas, primarily within the urban development boundaries for each of the five Community Plans areas (Jamestown, Columbia, East Sonora, Tuolumne, and Mountain Springs). However, the existing urban development boundaries may be expanded to allow dense growth to occur near existing community nodes. Development that would occur outside of existing urban development boundaries would mostly occur adjacent to the urban boundaries of the plan areas, known as the urban fringe.

Because of the programmatic nature of the General Plan Update, a precise, project-level analysis of the specific impacts of individual transportation projects on riparian habitats and other sensitive communities is not possible at this time and the level of analysis is maintained at the County level. Build-out under the General Plan Update is focused to the urban development boundaries and infill located within existing communities which would minimize or avoid the impact to riparian areas and sensitive communities. However, some riparian areas and other sensitive communities are expected to be encountered during development consistent with the

Land Use Element where development may occur within or adjacent to natural habitats such as at urban fringe areas or where creeks and rivers pass through urban areas. Thus, it is assumed that some resources would not be avoided by future development and transportation improvements that result from the proposed land use changes in the General Plan Update. As such, potentially significant impacts could occur.

In addition, projects in the vicinity of rivers and creeks may involve development along riparian corridors. Riparian areas provide wildlife habitat, and movement corridors, enabling both terrestrial and aquatic organisms to move along river systems between areas of suitable habitat. Construction of the proposed facilities could have both direct impacts associated with the disturbance of riparian flora and fauna and indirect impacts caused by increased erosion and sedimentation. This could adversely affect downstream water quality. In addition to riparian habitats, oak woodland communities and other vegetation communities which are considered sensitive also occur within Tuolumne County. Developments in the vicinity of these habitats are likely to occur due to the abundance of these habitats occurring on private lands in the county.

Direct impacts to riparian and other sensitive habitats include removal during construction of projects and development that would be facilitated by the General Plan Update. Indirect impacts include habitat degradation caused by the introduction of invasive plant species incidentally from construction equipment and through selection of invasive landscape plants, as well as erosion of disturbed areas.

The General Plan Update includes the following policies and implementation programs, the implementation of which reduce impacts to riparian habitat and other sensitive communities.

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| <i>Policy 4.J.3</i> | <i>Provide local information to assist in the evaluation of biological resources.</i> |
| <i>Policy 4.J.4</i> | <i>Evaluate impacts to biological resources in accordance with, but not exceeding, the requirements of State and Federal law.</i> |
| <i>Policy 4.J.8</i> | <i>Encourage development in urban areas and infill projects to minimize impacts to biological resources.</i> |
| <i>Policy 4.K.1</i> | <i>Develop, promote, identify and assist in the implementation of voluntary incentive programs to encourage private property owners to conserve areas that support high value biological resources, such as habitat for rare, threatened and endangered species; habitats that are particularly valuable to wildlife and/or rare in the County; and undisturbed oak woodlands.</i> |
| <i>Policy 4.K.2</i> | <i>Support efforts to identify and acquire high value biological resource areas on private lands from willing sellers, especially those areas that provide additional public benefits including educational, recreational and scenic opportunities, protect and encourage productive use of valuable agricultural lands and areas which provide buffers between defined communities.</i> |

Policy 4.K.4 Encourage the conservation of oak woodlands and the preservation of heritage trees.

Implementation

Program 4.I.j

Establish a Heritage Tree Program. Establish a Heritage Tree Program which:

- 1. Establishes criteria for identifying individual or groves of native and non-native trees and street trees as heritage trees, based on outstanding scenic, historic or biological value and/or the status of the tree as unique in terms of age and/or size when compared to other trees of the same species. Trees considered local landmarks and those contained in the National Register of Big Trees also should be considered as heritage trees.*
- 2. Creates programs encouraging the preservation of heritage trees including recognition and public education programs and participation in intercounty and interstate competitions.*
- 3. Addresses health and safety issues associated with trees located adjacent to local airports.*

Implementation

Program 4.I.l

Vegetation Removal. Formulate and maintain a program to retain existing significant vegetation, such as Heritage Trees, stands of oak woodlands, or clusters of native shrubs, which contributes to defining the County's character, within new development requiring a discretionary entitlement subject to the California Environmental Quality Act through incentives. Revegetation programs may be required for premature vegetation removal. Continue to maintain the Premature Removal of Native Oak Trees Ordinance. This program shall not apply to vegetation removal under a Timber Harvest Plan approved by the California Department of Forestry and Fire Protection, for agricultural uses, for fire protection purposes, for safety purposes or in response to storm damage.

Implementation

Program 4.J.g

Mitigate Impacts Consistent with State and Federal Law. Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- Threatened and Endangered plant and animal species listed by the Federal Endangered Species Act.*
- Rare, Threatened and Endangered plant and animal species listed by the California Endangered Species Act.*

- *Other special status species including, but not limited to, Federal candidate species for listing, State candidate species for listing, California Fully Protected Species, California Species of Special Concern, State designated Birds of Prey (subject to Section 3503.5 of the Fish and Game Code), birds subject to the Migratory Bird Treaty Act, plant species listed by the California Native Plant Society as Rank 1 or 2, bald eagles and golden eagles.*
- *Wetlands under either Federal or State jurisdiction.*
- *Oak woodlands, except as provided in Implementation Program 4.J.h.*

*Implementation
Program 4.J.h*

Thresholds of Significance for Oak Woodland Conversion. Establish thresholds of significance under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands in Tuolumne County as follows:

- *Oak woodland conversion on parcels two acres or smaller in area or that are designated for urban land uses is not considered a significant impact.*
- *Oak woodland conversion on parcels larger than two acres in area where the oak woodland would be reduced by less than the following percentages is not considered a significant impact:*
 - *Parcel size greater than 2 acres up to 10 acres = 50%*
 - *Parcel size greater than 10 acres up to 20 acres = 25%*
 - *Parcel size greater than 20 acres = 5 acres or 10%, whichever is greater*
- *Oak woodland conversion on parcels larger than two acres in area or not designated for urban land uses may be considered to not be a significant impact if so determined by the decision making body after considering an analysis prepared by a biologist, botanist, arborist or registered professional forester on the County's list of approved environmental consultants.*

*Implementation
Program 4.J.p*

Encourage Development in Urban and Infill Areas. Provide incentives to encourage development in urban and infill areas to minimize impacts to biological resources.

*Implementation
Program 4.J.q*

Reduced Impacts from Urban and Infill Development. When evaluating land development projects proposed in urban and infill areas, recognize that there may be reduced impacts to biological resources from concentrating new development adjacent to existing developed areas rather than disturbing remote areas that are free from the effects of development.

*Implementation
Program 4.K.f*

Tuolumne County Oak Woodland Voluntary Management Guidelines. Continue to make the Tuolumne County Oak Woodland Voluntary

Management Guidelines available to property owners upon request to assist them with voluntary conservation of oak woodlands.

The Jamestown Community Plan includes the following policies and implantation programs, the implementation of which reduces potential impacts to riparian habitat and other sensitive communities within the Jamestown plan area.

Policy 14.F.8 Preserve natural resource and wildlife habitat areas, reduce exposure to risk in hazardous areas, and enable recreational opportunities to be maintained or provided by designating hazardous areas, such as floodways, and biological and water resources areas as Open Space.

*Implementation
Program 14.F.c Limit Crossing of Waterways. Limit the number of road crossings of streams, creeks and other drainages and require the design of crossings to be perpendicular to Woods Creek and other drainages to minimize impacts of riparian habitat as a condition of approval of entitlements for new development.*

*Implementation
Program 14.F.d Encourage Retaining Woods Creek in an Open Condition. Discourage, through the land development application review process, the culverting, piping or lining of Woods Creek by private entities unless no alternative is feasible. Where valuable riparian habitat is destroyed by such necessary action, alternate habitat improvements may be required on or off-site.*

*Implementation
Program 14.F.e Habitat Conservation and Recreational Opportunities along Woods Creek. Require appropriate mitigation for impacts to biological resources from new development along Woods Creek and encourage the design of such new development to accommodate the provision of trails along the Creek for recreational opportunities. The future provision of easements and trails along Woods Creek shall not in any manner, authorize trespass upon private property, or increase the right of public agencies to gain access to private property unless expressly authorized by the property owner.*

The Columbia Community Plan includes the following policies and implementation programs, the implementation of which reduces potential impacts to riparian habitat and other sensitive communities within the Columbia plan area.

Policy 15.E.8 Encourage protection of vegetation noteworthy within the Columbia area, such as stands of mature ponderosa and sugar pine trees.

*Implementation
Program 15.E.c Woods Creek and Mormon Creek. Require appropriate mitigation for impacts to biological resources from new development along Woods*

Creek and Mormon Creek and encourage the design of such development to accommodate the provision of non-motorized trails along the creeks for recreational opportunities. Encourage the dedication of public access easements to capitalize on the recreational opportunities of Mormon Creek and Woods Creeks.

The East Sonora Community Plan includes the following policies and implementation programs, the implementation of which reduces potential impacts to riparian habitat and other sensitive communities within the East Sonora plan area.

Policy 16.C.6 Encourage and support voluntary efforts to protect and enhance Sullivan Creek, Elsey's Pool, Curtis Creek, Sonora Creek and associated riparian vegetation for scenic and recreational values.

*Implementation
Program 16.C.e Limit Crossing of Waterways. Limit the number of road crossings of streams, creeks and other tributaries of Sullivan, Sonora and Curtis Creeks to minimize impacts of riparian habitat as a condition of approval of entitlements for new development.*

The Tuolumne Community Plan includes the following implementation program, the implementation of which reduces potential impacts to riparian habitat and other sensitive communities within the Tuolumne plan area.

*Implementation
Program 17.F.h Retain Turnback Creek in an Open Condition. Discourage, through the land development application review process, the culverting, piping, or lining of Turnback Creek by private entities. Where valuable riparian habitat is destroyed by unavoidable actions, revegetation plans designed and monitored by qualified individuals should be undertaken.*

Policies and implementation programs are aimed to quantify significance of impacts to oak woodlands and limit the impact to sensitive communities, including riparian areas. Implementation of implementation program 4.J.g would require development that is subject to a discretionary entitlement from the County and to environmental review under CEQA to determine and mitigate for impacts to oak woodlands. However, this implementation program does not include requirements for analyzing impacts to riparian habitats and other sensitive communities that are not oak woodlands.

According to PRC 21083.4, a county shall determine whether a project within its jurisdiction may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county shall require one or more oak woodlands mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands such as acquisition of conservation easements, planting, and contribution of funds to an Oak Woodlands Conservation Fund. As described in CEQA Guidelines Section 15064.7(b), thresholds of significance must be based on substantial evidence. The proposed General Plan Update, with Implementation Program 4.J.h, which presents thresholds of significance for conversion of oak woodlands, may result in the

conversion of approximately 3,785 acres of oak woodland habitat, which represents approximately 3.05% of the County's existing oak woodland habitat on private lands (approximately 124,000 acres).¹ The County has 3,785 acres of oak woodlands located on acres of 2 or fewer acres or on parcels that are designated for urban uses. Because the implementation program would exempt parcels in the County that fit under this criterion, it is anticipated that up to 3,785 acres of oak woodland could be converted. The significance of impacts to oak woodlands should be determined on a project by project and cumulative basis and take into account the amount of woodland area converted, regional context (i.e. is the area isolated or part of a larger contiguous area of oak woodland), rarity, structure, and quality (UC Integrated Hardwood Management Program, 2008). Therefore, impacts related to sensitive communities and riparian habitats are potentially significant and mitigation measures are required for development associated with the General Plan Update.

Mitigation Measures. The following mitigation measures are recommended to reduce impacts to riparian habitats and other sensitive plant communities.

BIO-2(a) Revision to Proposed Implementation Program 4.J.g. The following implementation program included in the Tuolumne County General Plan Update shall be revised as follows (additions to the implementation program are shown in underline):

4.J.g Mitigate Impacts Consistent with State and Federal Law

Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- *Threatened and Endangered plant and animal species listed by the Federal Endangered Species Act.*
- *Rare, Threatened and Endangered plant and animal species listed by the California Endangered Species Act.*
- *Other special status species including, but not limited to, Federal candidate species for listing, State candidate species for listing, California Fully Protected Species, California Species of Special Concern, State designated Birds of Prey (subject to Section 3503.5 of the Fish and Game Code), birds subject to the Migratory Bird Treaty Act, plant species listed by the California Native Plant Society as Rank 1 or 2, bald eagles and golden eagles.*
- *Riparian habitats and other vegetation alliances with State ranks of S1-S3 that would be considered sensitive.*
- *Wetlands under either Federal or State jurisdiction.*
- *Oak woodlands.*

¹ Acreage of Oak Woodland habitat based upon data provided by Tuolumne County GIS Department, November 2015

BIO-2(b) **Revision of Implementation Program 4.J.h.** The following implementation program included in the Tuolumne County General Plan Update shall be revised as follows.

4.J.h *Significance for Oak Woodland Conversion. Where oak woodlands occur, evaluate on a project-by-project basis under the California Environmental Quality Act (CEQA) for the conversion of oak woodlands as follows:*

- *Oak woodland conversion on parcels two acres or smaller in area ~~or~~ and that are designated for urban land uses is not considered a significant impact.*
- *~~Oak woodland conversion on parcels larger than two acres in area where the oak woodland would be reduced by less than the following percentages is not considered a significant impact:~~*
 - *~~Parcel size greater than 2 acres up to 10 acres = 50%~~*
 - *~~Parcel size greater than 10 acres up to 20 acres = 25%~~*
 - *~~Parcel size greater than 20 acres = 5 acres or 10%, whichever is greater~~*
- *Oak woodland conversion on parcels larger than two acres in area or not designated for urban land uses may be considered to not be a significant impact if so determined by the decision making body after considering an analysis prepared by a biologist, botanist, arborist or registered professional forester on the County's list of approved environmental consultants. The evaluation should take into account, but is not limited to, the following:*
 - *The number of acres to be converted*
 - *Regional context*
 - *Quality/Condition*
 - *Structure*
 - *Rarity*

Significance after Mitigation. Implementation of mitigation measure BIO-2(a) and BIO-2(b) in combination with the existing Oak Woodlands Conservation Fund established by the County and Chapter 9.24 - Premature Removal Of Native Oak Trees, of the County of Tuolumne Ordinance Code and in addition to the proposed General Plan policies and implementation programs would reduce impacts associated with build-out of the General Plan Update to riparian habitats and other sensitive communities, such as oak woodlands as discussed above. With the suggested revisions to Implementation Measure 4.J.h as required by Mitigation Measure BIO-2(b), the total potential conversion of oak woodland habitat on private lands in the County would be reduced from approximately 3,785 acres to approximately 644 acres.² Thus, the total potential conversion of oak woodlands would be reduced to approximately 0.52% of the total oak woodlands countywide on private land. Therefore, because the potential conversion of oak woodlands would be less than 1%, impacts to riparian

² Acreage of Oak Woodland habitat based upon data provided by Tuolumne County GIS Department, November 2015

habitats and other sensitive communities would be reduced to a less than significant level with implementation of the above mitigation measure.

Impact BIO-3 Development facilitated by the General Plan Update may result in impacts to federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. This impact would be Class III, less than significant.

Under the proposed General Plan Update, the majority of new development is expected to occur in existing urbanized areas, primarily within the urban development boundaries for each of the five Community Plans areas (Jamestown, Columbia, East Sonora, Tuolumne, and Mountain Springs). Because of the programmatic nature of the Tuolumne County General Plan Update, a precise, project-level analysis of the specific impacts of individual projects on wetlands as defined by Section 404 of the Clean Water Act is not possible at this time and the level of analysis is maintained at the County level. Build-out under the General Plan Update is focused to the urban development boundaries and infill located within existing communities which would generally minimize or avoid the impact to wetlands. However, some wetlands, including creeks and rivers, are expected to be encountered during build-out within Tuolumne County, including the community plan areas especially within or adjacent to natural habitats such as at urban fringe areas or where creeks and rivers pass through urban areas. The extent and severity of the impacts is not known at this time, but some examples of potential impacts include, but are not limited to development occurring in close proximity to waterways such as Woods Creek and the Tuolumne River. Transportation improvements that may occur to accommodate future development in the county also have potential to impact wetlands, especially future proposed bridge projects. Indirect impacts caused by future development could include degradation of water quality from increased erosion and sedimentation. However, the General Plan Update includes the following policies and implementation programs, the implementation of which would reduce impacts to wetlands as defined by Section 404 of the Clean Water Act.

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| <i>Policy 4.J.3</i> | <i>Provide local information to assist in the evaluation of biological resources.</i> |
| <i>Policy 4.J.4</i> | <i>Evaluate impacts to biological resources in accordance with, but not exceeding, the requirements of State and Federal law.</i> |
| <i>Policy 4.J.8</i> | <i>Encourage development in urban areas and infill projects to minimize impacts to biological resources.</i> |
| <i>Policy 4.K.1</i> | <i>Develop, promote, identify and assist in the implementation of voluntary incentive programs to encourage private property owners to conserve areas that support high value biological resources, such as habitat for rare, threatened and endangered species; habitats that are particularly valuable to wildlife and/or rare in the County; and undisturbed oak woodlands.</i> |

Policy 4.K.2 *Support efforts to identify and acquire high value biological resource areas on private lands from willing sellers, especially those areas that provide additional public benefits including educational, recreational and scenic opportunities, protect and encourage productive use of valuable agricultural lands and areas which provide buffers between defined communities.*

*Implementation
Program 4.J.g* *Mitigate Impacts Consistent with State and Federal Law. Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:*

- *Threatened and Endangered plant and animal species listed by the Federal Endangered Species Act.*
- *Rare, Threatened and Endangered plant and animal species listed by the California Endangered Species Act.*
- *Other special status species including, but not limited to, Federal candidate species for listing, State candidate species for listing, California Fully Protected Species, California Species of Special Concern, State designated Birds of Prey (subject to Section 3503.5 of the Fish and Game Code), birds subject to the Migratory Bird Treaty Act, plant species listed by the California Native Plant Society as Rank 1 or 2, bald eagles and golden eagles.*
- *Wetlands under either Federal or State jurisdiction.*
- *Oak woodlands, except as provided in Implementation Program 4.J.h.*

*Implementation
Program 4.J.p* *Encourage Development in Urban and Infill Areas. Provide incentives to encourage development in urban and infill areas to minimize impacts to biological resources.*

*Implementation
Program 4.J.q* *Reduced Impacts from Urban and Infill Development. When evaluating land development projects proposed in urban and infill areas, recognize that there may be reduced impacts to biological resources from concentrating new development adjacent to existing developed areas rather than disturbing remote areas that are free from the effects of development.*

The Jamestown Community Plan includes the following implementation programs, the implementation of which reduces potential impacts to wetlands as defined by Section 404 of the Clean Water Act within the Jamestown plan area.

Implementation



Program 14.F.b *Require Filtration of Surface Runoff Entering Woods Creek. Require as a condition of approval of discretionary entitlements for new development that surface runoff from the development be filtered through sedimentation basins, or similar devices, as needed, prior to discharge into downstream drainages to minimize degradation, related to the water quality and quantity, of downstream water bodies.*

Implementation
Program 14.F.c *Limit Crossing of Waterways. Limit the number of road crossings of streams, creeks and other drainages and require the design of crossings to be perpendicular to Woods Creek and other drainages to minimize impacts of riparian habitat as a condition of approval of entitlements for new development.*

Implementation
Program 14.F.d *Encourage Retaining Woods Creek in an Open Condition. Discourage, through the land development application review process, the culverting, piping or lining of Woods Creek by private entities unless no alternative is feasible. Where valuable riparian habitat is destroyed by such necessary action, alternate habitat improvements may be required on or off-site.*

Implementation
Program 14.F.e *Habitat Conservation and Recreational Opportunities along Woods Creek. Require appropriate mitigation for impacts to biological resources from new development along Woods Creek and encourage the design of such new development to accommodate the provision of trails along the Creek for recreational opportunities. The future provision of easements and trails along Woods Creek shall not in any manner, authorize trespass upon private property, or increase the right of public agencies to gain access to private property unless expressly authorized by the property owner.*

The Columbia Community Plan includes the following policies and implementation programs, the implementation of which reduces potential impacts to wetlands as defined by Section 404 of the Clean Water Act within the Columbia plan area.

Policy 15.E.4 *Encourage and support efforts to protect and enhance Woods Creek, Mormon Creek and the Dondero Trail for scenic and recreational values.*

Implementation
Program 15.E.c *Woods Creek and Mormon Creek. Require appropriate mitigation for impacts to biological resources from new development along Woods Creek and Mormon Creek and encourage the design of such development to accommodate the provision of non-motorized trails along the creeks for recreational opportunities. Encourage the dedication of public access easements to capitalize on the recreational opportunities of Mormon Creek and Woods Creek.*

The East Sonora Community Plan includes the following policies and implementation programs, the implementation of which reduces potential impacts to wetlands as defined by Section 404 of the Clean Water Act within the East Sonora plan area.

Policy 16.C.6 Encourage and support voluntary efforts to protect and enhance Sullivan Creek, Elsey's Pool, Curtis Creek, Sonora Creek and associated riparian vegetation for scenic and recreational values.

*Implementation
Program 16.C.d Require Filtration of Surface Runoff. Require as a condition of approval of discretionary entitlements for new development that surface runoff from that development be filtered through sedimentation basins, sand/oil separators or similar devices prior to discharge into Sullivan, Sonora and Curtis Creeks to minimize degradation of their waters.*

*Implementation
Program 16.C.e Limit Crossing of Waterways. Limit the number of road crossings of streams, creeks and other tributaries of Sullivan, Sonora and Curtis Creeks to minimize impacts of riparian habitat as a condition of approval of entitlements for new development.*

The Tuolumne Community Plan includes the following policies and implementation program, the implementation of which reduces potential impacts to wetlands as defined by Section 404 of the Clean Water Act within the Tuolumne plan area.

Policy 17.F.7 Protect Turnback Creek and its watershed as a valuable educational, cultural, open space, recreational, wildlife corridor, and scenic resource.

Policy 17.F.9 Discourage construction within floodplains.

*Implementation
Program 17.F.h Retain Turnback Creek in an Open Condition. Discourage, through the land development application review process, the culverting, piping, or lining of Turnback Creek by private entities. Where valuable riparian habitat is destroyed by unavoidable actions, revegetation plans designed and monitored by qualified individuals should be undertaken.*

Implementation of implementation program 4.J.g would require development that is subject to a discretionary entitlement from the County and to environmental review under the CEQA to determine and mitigate for impacts to wetlands. Additional policies and implementation programs are aimed to avoid impacts to wetlands including creeks, and requires development to filter runoff to maintain water quality. Implementation of the above policies and implementation programs to protect wetlands would reduce impacts to wetlands to a less than significant level.

Mitigation Measures. Additional mitigation beyond adherence to applicable proposed General Plan policies and implementation programs is not required.

Significance after Mitigation. Implementation of the proposed General Plan policies and implementation programs would reduce impacts of General Plan build-out to wetlands to a less than significant level.

Impact BIO-4 Development facilitated by the General Plan Update may interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors. *Class II, significant but mitigable.*

Under the proposed General Plan Update, the majority of new development is expected to occur in existing urbanized areas, primarily within the urban development boundaries for each of the five Community Plan areas (Jamestown, Columbia, East Sonora, Tuolumne, and Mountain Springs). Because of the programmatic nature of the Tuolumne County General Plan Update, a precise, project-level analysis of the specific impacts of individual projects on wildlife movement is not possible at this time and the level of analysis is maintained at the County level. As noted in Section 4.4.1.d Tuolumne County contains essential connectivity areas and linkage areas that were identified as important landscape blocks that are integral in maintaining connectivity on a regional level. Overall as development increases, as facilitated by the General Plan Update, the quality of habitat within the County would be expected to lower in value to wildlife and would facilitate fragmenting the landscape overall especially in some areas along urban fringe areas where natural habitat may no longer be available for wildlife movement for a large number of species once developed. Development of infill parcels is not likely to affect wildlife movement unless containing some feature, such as a creek or drainage that can facilitate movement within the urban area. Corridors for movement such as riparian areas, drainages and other natural features become increasingly important for exchange of individuals and subsequently genetic material between wildlife populations. In addition, as development further encroaches upon wildlife habitat, increases in human activity in areas where sensitive biological resources could occur would be expected.

Direct impacts to wildlife include incremental fragmentation of the landscape, disturbance from increased noise and human presence, as well as increased trash which may attract predators and discourage wildlife use of surrounding natural habitat. Indirect impacts include invasion of natural habitats by non-native species and increased presence of humans and domestic animals over the long-term. In addition, development, including transportation projects, could include segments of fencing, walls or other structures that would hinder wildlife movement.

The General Plan Update includes the following policies and implementation programs, the implementation of which reduce impacts to wildlife movement. However, although impacts would be reduced, the impact would be potentially significant.

Policy 4.J.3 Provide local information to assist in the evaluation of biological resources.

Policy 4.J.8 Encourage development in urban areas and infill projects to minimize impacts to biological resources.

*Implementation
Program 4.J.p*

Encourage Development in Urban and Infill Areas. Provide incentives to encourage development in urban and infill areas to minimize impacts to biological resources.

*Implementation
Program 4.J.q*

Reduced Impacts from Urban and Infill Development. When evaluating land development projects proposed in urban and infill areas, recognize that there may be reduced impacts to biological resources from concentrating new development adjacent to existing developed areas rather than disturbing remote areas that are free from the effects of development.

The Jamestown Community Plan includes the following policy, the implementation of which reduces potential impacts to wildlife movement within the Jamestown plan area.

Policy 14.F.5

Maintain Woods Creek and the riparian vegetation along its banks as part of the continuous network of valuable wildlife habitat throughout the County in order to provide habitat corridors for wildlife that move back and forth between the larger tracts of high quality habitat.

The East Sonora Community Plan includes the following policy, the implementation of which reduces potential impacts to wildlife movement within the East Sonora plan area.

Policy 16.C.1

Minimize the existing conflict between development and wildlife habitat within East Sonora.

The Tuolumne Community Plan includes the following policy, the implementation of which reduces potential impacts to wildlife movement within the Tuolumne plan area.

Policy 17.F.7

Protect Turnback Creek and its watershed as a valuable educational, cultural, open space, recreational, wildlife corridor, and scenic resource.

Mitigation Measures. The following mitigation measures are recommended to reduce impacts to wildlife movement.

BIO-4(a)

Revision to Proposed Implementation Program 4.J.g. The following implementation program included in the *Tuolumne County General Plan Update* shall be revised [underlined] as follows in addition to BIO-2 [indicated in double underline] above:

4.J.g *Mitigate Impacts Consistent with State and Federal Law*

Require development that is subject to a discretionary entitlement from the County and to environmental review under the California Environmental Quality Act (CEQA) to evaluate potential impacts to biological resources and mitigate significant impacts for the following or as otherwise required by State or Federal law:

- *Threatened and Endangered plant and animal species listed by the Federal Endangered Species Act.*
- *Rare, Threatened and Endangered plant and animal species listed by the California Endangered Species Act.*
- *Other special status species including, but not limited to, Federal candidate species for listing, State candidate species for listing, California Fully Protected Species, California Species of Special Concern, State designated Birds of Prey (subject to Section 3503.5 of the Fish and Game Code), birds subject to the Migratory Bird Treaty Act, plant species listed by the California Native Plant Society as Rank 1 or 2, bald eagles and golden eagles.*
- *Riparian habitats and other vegetation alliances with State ranks of S1-S3 that would be considered sensitive.*
- *Wetlands under either Federal or State jurisdiction.*
- *Oak woodlands, except as provided in Implementation Program 4.J.h.*
- *Movement of any resident or migratory fish or wildlife species or established resident or migratory wildlife corridors.*

BIO-4(b) New Implementation Program to Address Wildlife Movement. The following implementation program shall be added to the General Plan Update's Natural Resources Element:

- 4.J.r** *Encourage Development to be compatible with wildlife movement. The County should work with applicants to encourage preservation or enhancement of upland habitat for wildlife species to the maximum extent feasible on parcels slated for development containing suitable habitat (e.g. areas used for foraging, breeding, dispersal, etc.). Habitat preservation and enhancement should be encouraged throughout the county in a way that promotes regional connectivity. The County should work with applicants to encourage development to be compatible with wildlife movement such as designing non-security type fencing or lighting to minimize interference with wildlife movement.*

Significance after Mitigation. Implementation of the proposed General Plan policies and implementation programs as well as proposed mitigation measures 4(a) and 4(b) would reduce impacts of General Plan build-out to wildlife movement and corridors. Therefore, impacts to wildlife movement would be less than significant with implementation of the above mitigation measure.

Impact BIO-5 Development facilitated by the General Plan Update would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. This is a Class III, less than significant, impact.

Chapter 9.24 - Premature Removal Of Native Oak Trees, of the County of Tuolumne Ordinance Code stipulates that the removal of native oak trees from a project site within the five (5) years preceding the submittal of an application for a discretionary entitlement from the County of

Tuolumne for a land development project on that site is deemed premature removal and sets forth penalties and requirements for mitigation.

The ordinance specifies that removals that qualify include:

- d. Removal of native oak trees resulting in a 10% or more (>10%) average decrease in native oak canopy cover within an oak woodland;
- e. Removal of any old growth oak trees;
- f. Removal of any Valley Oak measuring 5" or greater in diameter at breast height (dbh).

While some oak trees could be impacted from development facilitated by the General Plan Update, the scope of premature removals cannot be anticipated based on the programmatic level of analysis of this EIR. Nevertheless, assuming projects requiring discretionary entitlement abide by and implement mitigation based on Chapter 9.24 of the County Ordinance Code, the development facilitated by the General Plan Update is not expected to conflict with this ordinance. In addition, the County Oak Woodland Preservation Fund is a Board of Supervisors resolution which a fund is established for the collection of fees to mitigate impacts to oak woodlands and net loss of old growth oaks. No conflicts with this resolution are expected from development facilitated by the General Plan Update as there are no direct or indirect impacts to the resolution. Therefore impacts related to conflicts with local ordinances would be less than significant.

Mitigation Measures. Additional mitigation beyond adherence to applicable proposed General Plan policies and implementation programs and existing County Ordinance Code requirements is not required as impacts would be less than significant.

Significance after Mitigation. The proposed General Plan Update policies and implementation programs as well as existing County Ordinance Code requirements, would reduce potential impacts of General Plan buildout as discussed above. Therefore, impacts would remain less than significant.

Impact BIO-6 Development facilitated by the General Plan Update would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There are no local, regional, or state habitat conservation plans in Tuolumne County that would conflict with the General Plan Update. Therefore, there would be no impact.

No adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan occurs within Tuolumne County that would conflict with the General Plan Update. Therefore no impacts are expected as they relate to conflicts with existing local, regional, or state conservation plans.

Mitigation Measures. Additional mitigation beyond adherence to applicable proposed General Plan policies and implementation programs is not required.

Significance after Mitigation. There would be no impact.

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